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# Evaluation of the Affective Domain Questionnaire to Assess Changes in Learning Across Four Timed Measurements

Dale Hilty, PhD ~ Anne Hinze, MA, MS ~ Kali Clark, BSN Candidate

## Background

Krathwohl, Bloom, and Masia's (1964) taxonomy was used to develop an affective domain questionnaire.

| Responding                  |                                |
|-----------------------------|--------------------------------|
| 2.1                         | Acquiescence in responding     |
| 2.2                         | Willingness to respond         |
| 2.3                         | Satisfaction in response       |
| Valuing                     |                                |
| 3.1                         | Acceptance of a value          |
| 3.2                         | Preference of a value          |
| 3.3                         | Commitment                     |
| Organization                |                                |
| 4.1                         | Categorization of a value      |
| 4.2                         | Organization of a value system |
| Characterization by a value |                                |
| 5.1                         | Generalized set                |
| 5.2                         | Characterization               |

### Krathwohl et al . Definitions

**RESPONDING**, the individual is perceived as responding regularly to the affective stimuli.

2.1 Acquiescence in responding, s/he is merely complying with expectations (e.g., at the request of his teacher).

2.2 Willingness to respond, s/he responds increasingly to an inner compulsion (e.g., has an interest in social problems broader than those of the local community).

2.3 Satisfaction in response, s/he responds emotionally as well (e.g., works with clay, especially in making pottery for personal pleasure).

**VALUING** describe increasing internalization.

3.1 Acceptance of a value (e.g., continuing desire to develop the ability to write effectively and hold it more strongly),

3.2 Preference for a value (e.g., seeks out examples of good art for enjoyment of them to the level where s/he behaves so as to further this impression actively),

3.3 Commitment (e.g., faith in the power of reason and the method of experimentation).

### ORGANIZATION

4.1 Conceptualization of a value (e.g., to find out and crystallize the basic assumptions which underlie codes of ethics)

4.2 Organization of a value system (e.g., weighs alternative social policies and practices against the standards of public welfare).

## Background (Cont'd)

### CHARACTERIZATION

5.1 Generalized set (e.g., views all problems in terms of their aesthetic aspects, or readiness to revise

judgments and to change behavior in the light of evidence).

5.2 Characterization (e.g., develops a consistent philosophy of life).

### AFFECTIVE DOMAIN QUESTIONNAIRE (ADQ)

The first edition (FE) of the ADQ consisted of six items (i.e., one question for subdivision) which measured the Responding and Valuing categories (Krathwohl, Bloom, & Masia, 1964, p. 95). The ADQ second edition (SE) measured four categories: responding, valuing, organization, and characterization. ADQ-SE is comprised of 30 questions (i.e., three items for each of the 10 subcategories). Hilty, Hinze, & Clark (2018a) reported coefficient alpha reliability estimates for the ADQ-FE ranging from .803 to .911.

Hilty Gill-Rocha, Ross, Hinze, and Clark (2018b) found the Affective Domain Questionnaire (ADQ) consisted of three common factors with coefficient alpha reliability estimates ranging from .895 to .931. Using the competitive greatness scale (measuring a student's ability to be the best they can be when their best is needed, continuous self-improvement, and embracing difficult challenges) to create high versus moderate-low scoring groups, Hilty et al. (2018b) found significant differences between the two groups with the ADQ second and third common factors.

## Aim

The purpose of this educational intervention was to determine if the ADQ-SE would assess changes in learning across four timed measurements.

## Methods

While completing a senior level course emphasizing the importance of interprofessional communication among health care professionals, Bachelor of Science in Nursing (BSN) students' academic learning was assessed across four time periods.

**1st Assessment:** Pre-test regarding the role and function of 10 healthcare professionals (Advance Practice Nurses, Chaplains, Ethicists, Interpreters, Occupational & Physical Therapists, Pharmacists, Registered Dietitians, Respiratory Therapists, Social Workers, & Physicians ).

**Intervention 1:** Six or seven students formed small groups and selected one of the ten health care professional. Students wrote a paper focusing the historical basis, education, training, legislative concerns, holistic specialization, and license/certification. Students presented the paper to the class prior to submitting it for a grade.

### 2nd Assessment:

**Intervention 2:** A guest speaker from each of the 10 disciplines visited the class and shared the scope of practice, unique contributions, working relationships with Registered Nurses, and holistic recommendations.

### 3rd Assessment:

**Intervention 3:** Students assumed the role of a registered Nurse in an interprofessional simulation including the patient, family, and the 10 licensed professionals.

### 4th Assessment:

## Results

The first assessment measured changes in learning based on intervention 1. Using SPSS 25, the dependent t-test findings showed significant differences on the three ADQ common factors comparing data from Assessments 1 and 2 (questions evaluated term paper and class presentation). The next assessment measured changes in learning based on intervention 2. Significant differences were found comparing Assessments 1 and 3 (questions evaluated guest speaker presentations). The last assessment measured changes in learning based on intervention 3. Significant differences were found comparing Assessments 1 and 4.(questions evaluated the interprofessional simulation). All differences were significant at  $p=.001$ .

Coefficient alpha reliability estimates are presented in a table.

|        | Factor 1 | Factor 2 | Factor 3 |
|--------|----------|----------|----------|
| Time 1 | .896     | .938     | .889     |
| Time 2 | .939     | .954     | .932     |
| Time 3 | .921     | .878     | .949     |
| Time 4 | .939     | .953     | .950     |

## Discussion

Hilty et al. (2018a, 2018b) developed the ADQ instrument to measure the Krathwohl et al (1964) stages. The ADQ consists of 30 questions with three questions designed to measure the 10 stages. The three common factors assessed changes in learning across three interventions and four timed assessments. The dependent t-test findings were significant in all comparisons ( $p=.001$ ). Excellent coefficient alpha reliability estimates were found ranging from .896 to .954.

## References

- Hilty, D., Hinze, A., & Clark, K. (2018). Preliminary examination of the positive impact of affect on learning for nursing students. Podium presentation at 14th World Congress on Psychiatric & Mental Health Nursing, Vancouver, Canada.
- Hilty, D., Gill-Rocha, J., Ross, K, Hinze, A., & Clark, C. (2018b). Preliminary Investigation of the Affective Domain Questionnaire based on Krathwohl, Bloom, and Masia's (1964) Taxonomy.
- Krathwohl, D.R., Bloom, B.S., & Masia, B. B. (1964). *Taxonomy of educational objectives, Book II: Affective domain*. New York, NY. David McKay Company, Inc.